

Monday, August 29, 2016 3:04:50 PM

Item ID: D3537-1

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Wearpad

Stop

NS2

Start Date: 8/17/2016 **Start Qty:** 40.00

40

Cust Item ID:

Required Date: 8/29/2016 **Req'd Qty:** 40.00

40

Customer:

Reference:

Approvals: Process Plan: 21 Date: AUG 30 2016
8:39

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
										QC / QA Coordinator Approval															
Root Cause		FAULT CATEGORY																							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																			
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Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :																						
Misidentified ☐	☐	Past Due ☐																							

Work Order ID 150709

Monday, August 29, 2016 3:04:50 PM

150709

Page 2

Item ID: D3537-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearpad
Start Date: 8/17/2016 Start Qty: 40.00 ***40*** Cust Item ID:
Required Date: 8/29/2016 Req'd Qty: 40.00 ***40*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.01 0.13							 SEP 06 2016
140 *140* Brake NC Brake NC	Form as per dwg NC BRAKE Memo	0.00 0.33							 SEP 08 2016
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.13							 SEP 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Work Order ID 150709

Monday, August 29, 2016 3:04:50 PM

150709

Page 3

Item ID: D3537-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearpad
Start Date: 8/17/2016 Start Qty: 40.00 ***40*** Cust Item ID:
Required Date: 8/29/2016 Req'd Qty: 40.00 ***40*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* autoweld 1 Automated Welding 1	Weld per dwg & QSI004 4.5 Large Fab Memo ***SEE NOTE 8 FOR SURFACE BUILDUP*** 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: <u>12135051</u>	0.00 0.67				<u>44</u>	<u>12</u>	<u>16-9-15</u>	
170 *170* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.07				<u>44</u>	<u>16-09-16</u>		DAS 9 9-89
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.13				<u>44</u>	<u>16-09-16</u>		DAS 9 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☒

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : <u>16-09-19</u>	Step #: <u>131</u>	QTY Effective : <u>(14)</u>		MRB (QSI042) Approval <u>DAS</u> <u>9</u> <u>16-09-19</u>	
Description Work Order Deviation		Disposition			
<u>Apply work guard as per drawing</u>		<u>Batch #</u>			
		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			

Root Cause				FAULT CATEGORY			
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge
☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier
				☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing
				☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due
				Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Mislabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐			
				OTHER : _____			

Work Order ID 150709

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Item ID: D3537-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearpad

Start Date: 8/17/2016 Start Qty: 40.00

40

Cust Item ID:

Required Date: 8/29/2016 Req'd Qty: 40.00

40

Customer:

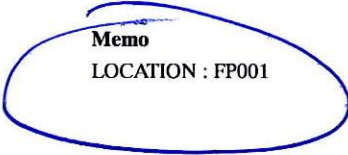
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: _____	0.00							
210									
Packaging	 Memo	0.07				41	DAS 6 9-89	SEP 20 2016	
Packaging	LOCATION : FP001								
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.67					DAS 21 9-89	SEP 20 2016	
Quality Control									
								DAS 21 9-89	SEP 20 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Monday, August 29, 2016 3:04:50 PM

Page 1

Work Order ID: 150709

150709

Parent Item: D3537-1

D3537-1

Parent Item Name: Wearpad

Start Date: 8/17/2016

Required Date: 8/29/2016

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP Rev:A New Issue 07-02-14 JLM
15.10.16 added automated welding DD verf:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased		No		100	sf	92.4698	0.106	4.463156			

M304S16GA

304/316 Sheet .063

2x 16 / 09 / 01

Location

Loc Qty

Loc Code

MAT010

75.97

m134677

4.27

m135061

1.7

m135377

70

TPI

16.499794

m134604

16.499794

4.8

DQA: _____ Date: _____

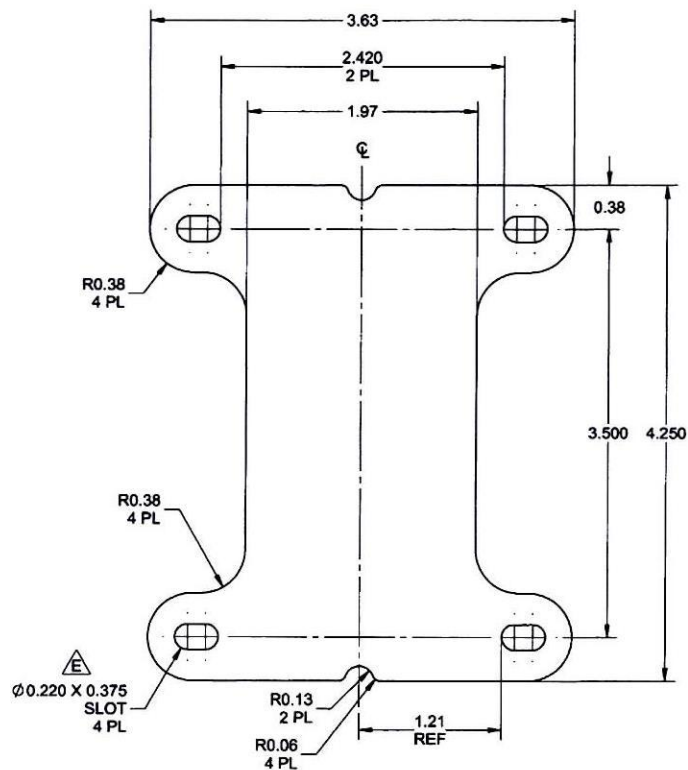


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

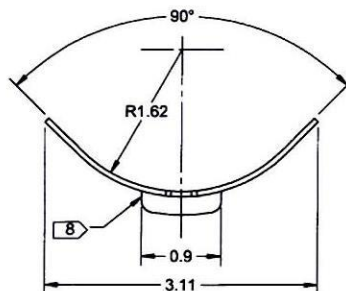
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								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			



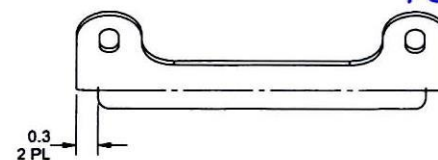
D3537-1F WEARPAD
(FLAT PATTERN)

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 16 GAUGE 0.063 THICK
PER MIL-S-5059 OR AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240
REF DART SPEC. M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.42 lbs
- 8) BUILDUP HARD SURFACING 0.17 - 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR
BUILDUP HARD SURFACING 0.19 - 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)



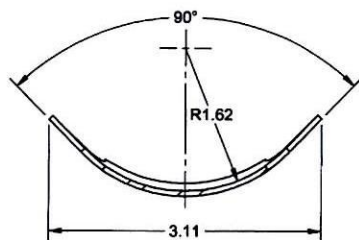
D3537-1 WEARPAD
MAKE FROM D3537-1F



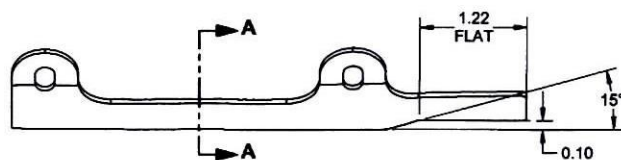
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150709 MJS
16-08-30

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2015-12-07
EUN 15-651

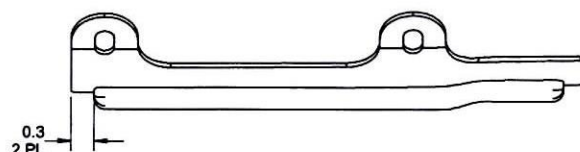
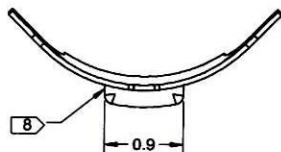
E	-5 DELETED PART IS OBSOLETE. RE-FORMAT. NOTE 8 RE-WRITTEN FOR ROBOTIC WELDING. SHEETS 1 & 2 SLOT DIMENSION UPDATED.	AJS	15.09.28
D	RE-FORMAT DRAWING, ADD -9/-11 WEARPADS	DB	14.10.16
C	WIDEN TAB TO 0.380, WEL PATTERN	CB	07.04.13
B	ADD AMS5510 AND AMS 5524	CB	07.03.20
A	NEW ISSUE	CB	06.11.06
REV.	DESCRIPTION	BY	DATE
DESIGN	CB	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3537	SHEET 1 OF 5
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPAD	NTS
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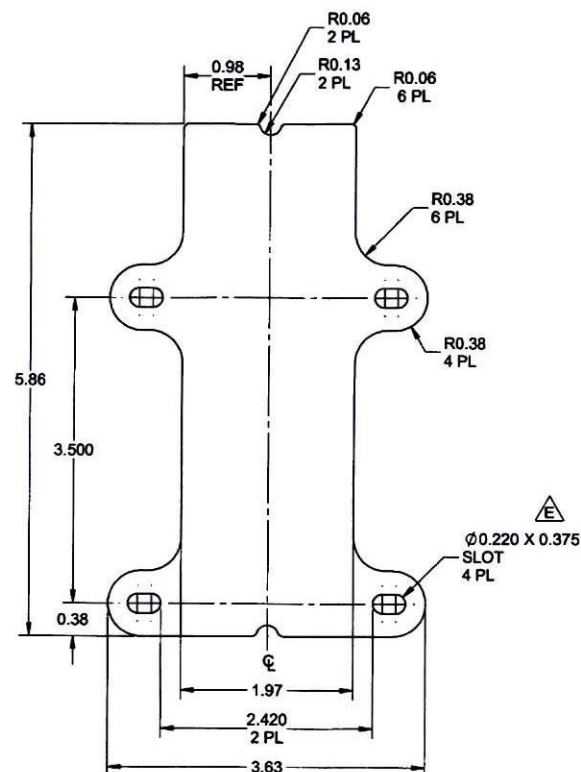
SECTION A-A



**D3537-3 WEARPAD
(BENDING DETAIL)
(MAKE FROM D3537-3F)**



**D3537-3 WEARPAD
(WELDMENT)**



**D3537-3F WEARPAD
(FLAT PATTERN)**

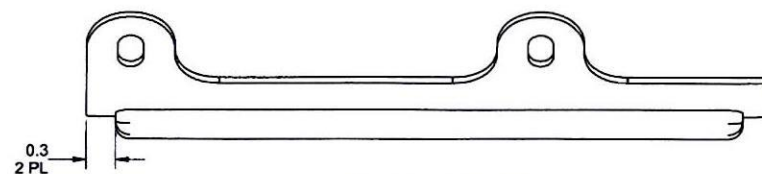
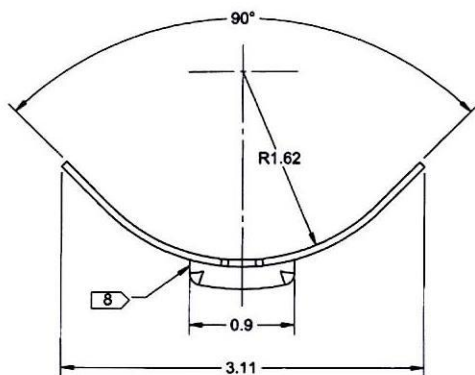
NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 16 GAUGE 0.063 THICK
PER MIL-S-5059 OR AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240
REF DART SPEC. M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.50 lbs
- 8) BUILDUP HARD SURFACING 0.17 - 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR
BUILDUP HARD SURFACING 0.19 - 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)

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MFG. APPR.	JLM	D3537	SHEET 2 OF 5
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPAD	NTS
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D3537-7 WEARPAD
(MAKE FROM D3537-3F)

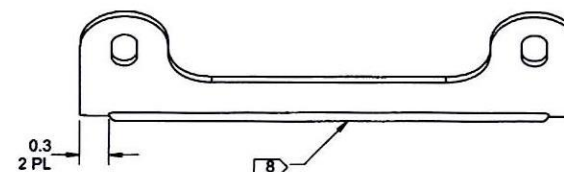
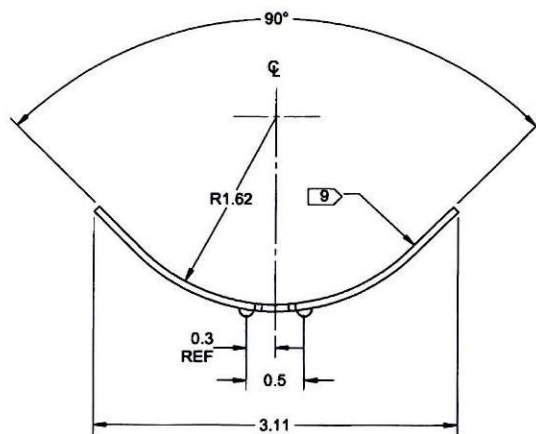
NOTES:

- 1) MATERIAL: MAKE FROM -3F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.50 lbs
- 8) BUILDUP HARD SURFACING 0.17 - 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR BUILDUP HARD SURFACING 0.19 - 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)

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MFG. APPR.	JLM	D3537	SHEET 3 OF 5
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DE APPR.	DS	WEARPAD	NTS
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D3537-9 WEARPAD
(MAKE FROM D3537-1F)

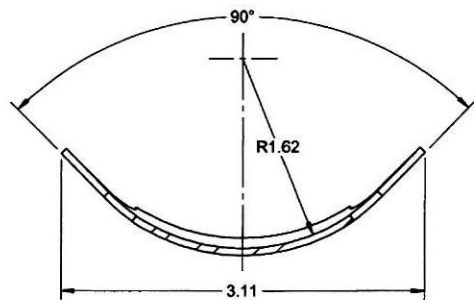
NOTES:

- 1) MATERIAL : MAKE FROM -1F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.19 lbs
- 8) APPLY HARD SURFACING WELD BEAD 0.06 - 0.13 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR APPLY HARD SURFACING WELD BEAD 0.06 - 0.13 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

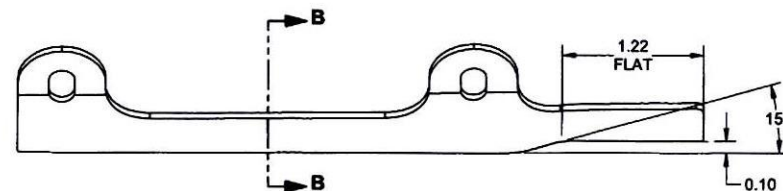
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2015-12-07

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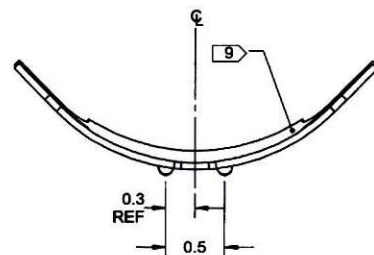
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DRAWN	AJS	EUGENE, OR	
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3537	SHEET 4 OF 5
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPAD	NTS
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SECTION B-B



D3537-11 WEARPAD
(BENDING DETAIL)
(MAKE FROM D3537-3F)



D3537-11 WEARPAD
(WELDMENT)

NOTES:

- 1) MATERIAL: MAKE FROM -3F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.25 lbs
- 8) APPLY HARD SURFACING WELD BEAD 0.06 - 0.13 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR APPLY HARD SURFACING WELD BEAD 0.06 - 0.13 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

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